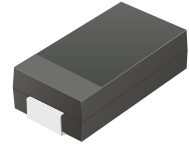


CGRB301-G Thru. CGRB307-G

Glass Passivated Type
Reverse Voltage: 50 to 1000 Volts
Forward Current: 3.0 Amp
RoHS Device

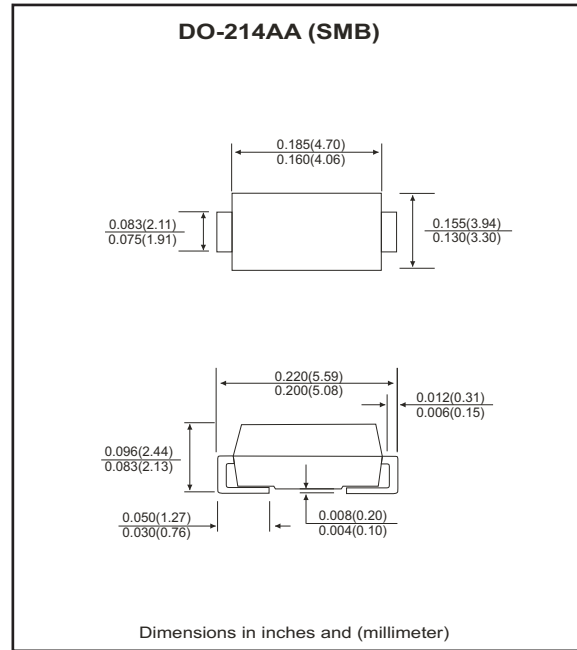


Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Built in strain relief.
- High surge current capability.

Mechanical data

- Case: JEDEC DO-214AA, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.093 grams



Maximum Ratings and Electrical Characteristics

| Parameter | Symbol | CGRB 301-G | CGRB 302-G | CGRB 303-G | CGRB 304-G | CGRB 305-G | CGRB 306-G | CGRB 307-G | Units |
|---|-----------------|-------------|------------|------------|------------|------------|------------|------------|--------------------|
| Max. repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Max. DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Max. RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | 100 | | | | | | | A |
| Max. average forward current | I_o | 3.0 | | | | | | | A |
| Max. instantaneous forward voltage at 3.0A | V_F | 1.1 | | | | | | | V |
| Max. DC reverse current at $T_A=25\text{ }^\circ\text{C}$ rated DC blocking voltage $T_A=125\text{ }^\circ\text{C}$ | I_R | 5.0 150 | | | | | | | μA |
| Max. thermal resistance (Note 1) | $R_{\theta JA}$ | 50 | | | | | | | $^\circ\text{C/W}$ |
| Max. operating junction temperature | T_J | 150 | | | | | | | $^\circ\text{C}$ |
| Storage temperature | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Notes: 1. Thermal resistance from junction to terminal mounted on P.C.B. with 5.0x5.0 mm square²(0.13mm thick) land area.

RATING AND CHARACTERISTIC CURVES (CGRB301-G thru CGRB307-G)

Fig.1 Reverse Characteristics

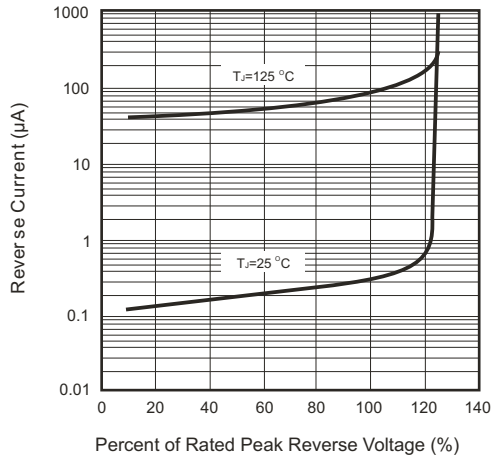


Fig.2 Forward Characteristics

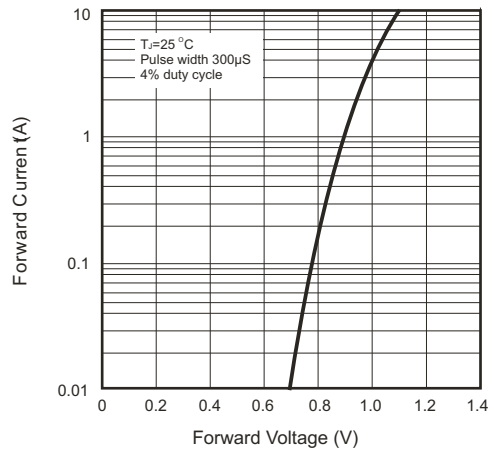


Fig.3 Junction Capacitance

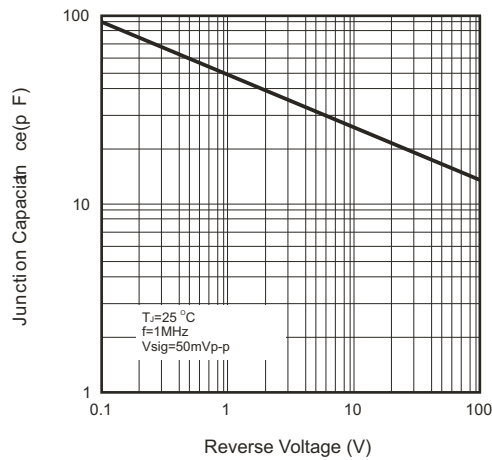


Fig.4 Current Derating Curve

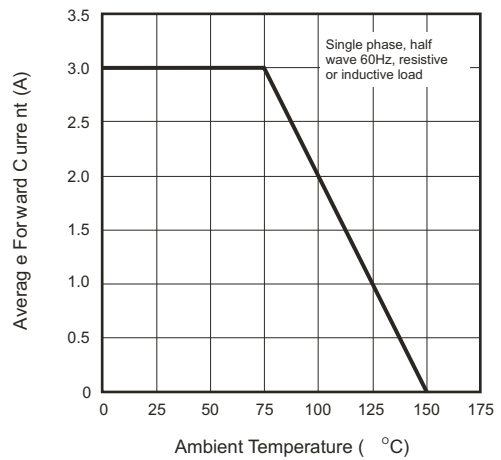
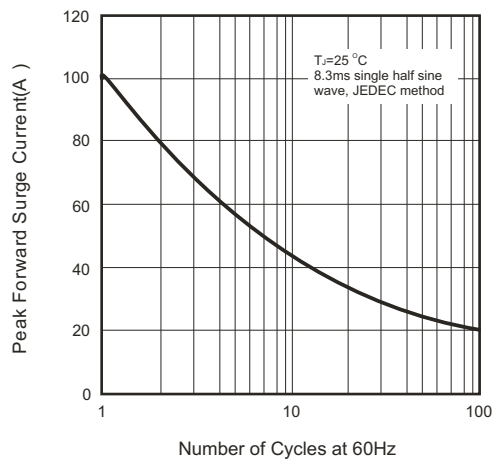
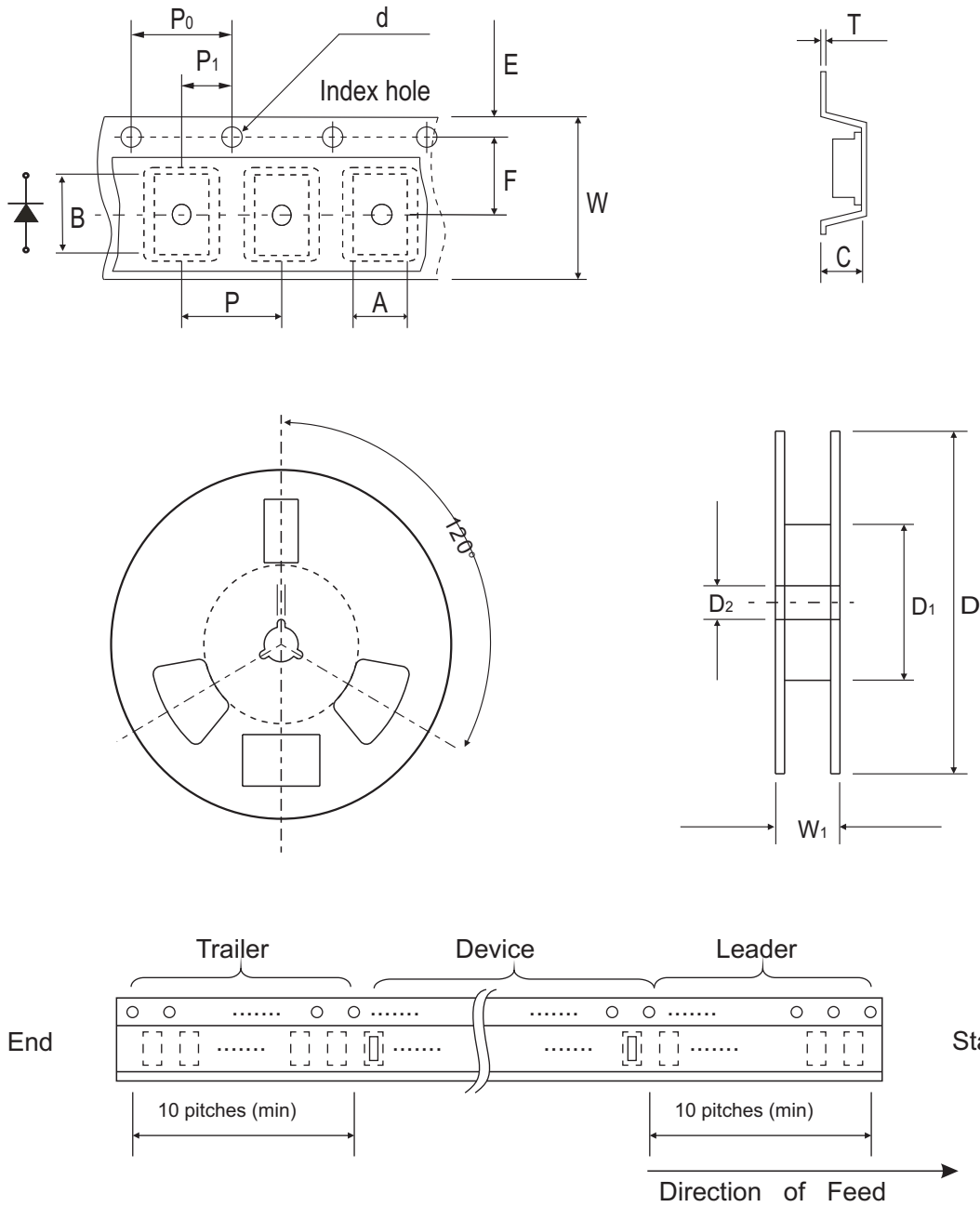


Fig.5 Non-repetitive Forward Surge Current



Reel Taping Specification

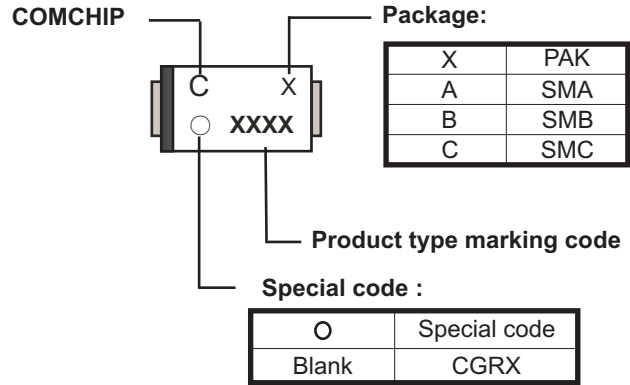


| DO-214AA (SMB) | SYMBOL | A | B | C | d | D | D1 | D2 | E |
|-------------------|--------|------------|------------|------------|------------------|---------------|------------|---------------|---------------|
| | (mm) | 4.00 MAX. | 5.90 MAX. | 3.00 MAX. | 1.50 ± 0.10DIA | 330 ± 2.00 | 50.0 MIN. | 13.50 ± 1.0 | 1.75 ± 0.1 |
| | (inch) | 0.157 MAX. | 0.232 MAX. | 0.118 MAX. | 0.059 ± 0.004DIA | 12.99 ± 0.079 | 1.969 MIN. | 0.531 ± 0.039 | 0.069 ± 0.004 |

| DO-214AA (SMB) | SYMBOL | F | P | P0 | P1 | T | W | W1 | W2 |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|-----------|-----------|
| | (mm) | 5.50 ± 0.05 | 8.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 0.60 MAX | 12.0 ± 0.30 | 18.4 MAX. | 14.4 MAX. |
| | (inch) | 0.217 ± 0.002 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.236 ± 0.004 | 0.472 ± 0.012 | 0.724 MAX | 0.566 MAX |

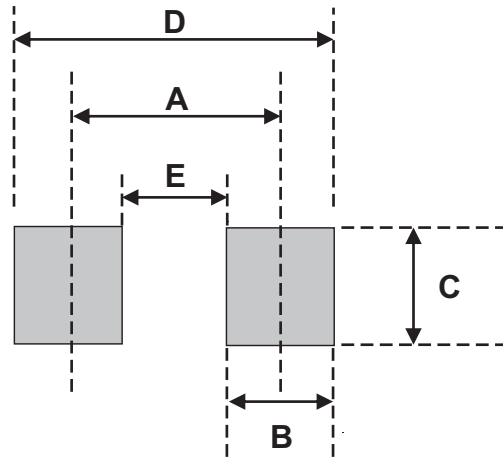
Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CGRB301-G | 301 |
| CGRB302-G | 302 |
| CGRB303-G | 303 |
| CGRB304-G | 304 |
| CGRB305-G | 305 |
| CGRB306-G | 306 |
| CGRB307-G | 307 |



Suggested PAD Layout

| SIZE | SMB | |
|------|------|--------|
| | (mm) | (inch) |
| A | 4.30 | 0.169 |
| B | 2.50 | 0.098 |
| C | 2.30 | 0.091 |
| D | 6.80 | 0.268 |
| E | 1.80 | 0.071 |



Standard Packaging

| Case Type | Qty Per Reel | Reel Size |
|----------------|--------------|-----------|
| | (Pcs) | (inch) |
| DO-214AA (SMB) | 3,000 | 13 |